

REMARKS/ARGUMENTS

Favorable reconsideration of this application as currently amended and in view of the following remarks is respectfully requested.

Claims 24-31 are currently active in this case. Claims 24, 27, and 30 have been amended by the current amendment. No new matter has been added.

In the outstanding office action, claims 24-31 were rejected under 35 USC 112, first paragraph, for failing the written description requirement.

Applicants acknowledge with appreciation the courtesy of an interview granted to Applicants' representative on June 19, 2006. During the interview, the outstanding 35 USC 112, first paragraph, rejections were discussed. The examiner indicated that she will reconsider the arguments regarding the "semiconductor optical wave guide" in view of the teachings in U.S. Patent No. 5,165,105 that a traveling wave electroabsorption modulator was known during the 2003 timeframe to inherently include a semiconductor optical wave guide.

However, the examiner also indicated during the interview that she would maintain the written description requirement regarding the "traveling wave electrodes" and the defined structure of the electrodes. Applicants point out that claim 24 has been amended by removing the limitation requiring the electrodes to be closely positioned relative to the optical wave guide. Consequently, the examiner's concern regarding the closely positioned feature which was expressed for the first time during the interview is moot. The outstanding 35 USC 112, first paragraph, rejection regarding the claim 24 recitation of traveling wave electrodes is traversed. In particular, applicants point to Figures 2 and 11 of applicants' specification which illustrates the electrodes recited in claim 24. The area of the electroabsorption material is adjacent to the ports 2 and 4. Moreover, Applicants have filed herewith a 37 CFR 1.132 declaration from Dr. Masatoshi Suzuki along with a copy of Dr. Suzuki's resume. Dr. Suzuki's declaration reflects that TW-EAMs necessarily include a semiconductor optical

waveguide for an optical signal and traveling wave electrodes for an electrical signal. In view of the forgoing, applicants submit that they were in possession of a semiconductor optical wave guide for an optical signal and a traveling wave electrodes for an electrical signal.

Regarding claims 27 and 30, those claims have been amended to clarify that the first electrical signal has a fundamental frequency or a subharmonic frequency of the second electrical signal. In particular, figure 11 illustrates that the first electrical signal entering port 4 has a frequency of 40 gigahertz which is disclosed on page 11 line 10-13 of the Specification as being the fundamental frequency. Further, Figure 2 illustrates that the first electrical signal can have a frequency of ten gigahertz. By definition, the ten gigahertz signal is a subharmonic frequency of the 40 gigahertz fundamental frequency. That is, subharmonic frequencies when multiplied by an integer equal a fundamental frequency. Consequently, no further rejection of claims 27 and 30 under 35 USC 112, first paragraph, is anticipated

For the foregoing reasons, the application is believed to be in condition for allowance. An early and favorable action is respectfully requested.

Respectfully submitted,

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
ZHAOYANG HU, ET AL. : EXAMINER: STULTZ, J.
SERIAL NO: 10/800,625 :
FILED: MARCH 16, 2004 : GROUP ART UNIT: 2873
FOR: APPARATUS FOR :
SIMULTANEOUS OTDM
DEMULTIPLEXING, ELECTRICAL
CLOCK RECOVERY AND OPTICAL
CLOCK GENERATION, AND OPTICAL
CLOCK RECOVERY

37 CFR 1.132 DECLARATION OF DR. MASATOSHI SUZUKI

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

(1) I am currently the Executive Director of KDDI R&D Laboratories.
(2) A copy of my resume is attached hereto.
(3) I have been informed by counsel, that "a person of ordinary skill in the art" is a mythical person to whom an expert in the relevant field could assign a routine task with reasonable confidence that the task could be successfully carried out.

(4) In preparing this declaration, I have reviewed the specification of the above-identified application (hereinafter referred to as "the Hu application"). The application is directed to "a new concept of utilizing independent electrical frequency division to fulfill simultaneous demultiplexing, electrical clock recovery and optical clock generation in the same one traveling-wave electroabsorption modulator (TW-EAM) without the ambiguity and the crosstalk problems." See page 4 lines 5-9 of the Specification.

(5) I understand that the Hu application is based on two U.S. provisional applications filed in March and April of 2003, respectively.

(6) Use of a traveling-wave electroabsorption modulator (hereinafter referred to as "TW-EAM") was well known in the field (art) of optical time division multiplexing in the 2002 to 2003 timeframe.

(7) It was known by a person of ordinary skill in the art that during the 2002 to 2003 timeframe that a TW-EAM necessarily includes a semiconductor optical waveguide for an optical signal and traveling wave electrodes for an electrical signal. See, e.g., IEEE Photonics Technology Letters Vol. 14, No. 6, June 2002 "High Extinction Ratio And Saturation Power Traveling-Wave Electroabsorption Modulator" and Electronics Letters published April 11, 2002, vol. 38, No. 8, "40 GHz Optical Pulse Generation Using Sinusoidally-Driven Traveling-Wave Electroabsorption Modulator", copies of which are attached hereto.

(8) I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Masatoshi Suzuki
(Dr. Masatoshi Suzuki)

September 12, 2006
Date

Resume of Dr. Masatoshi Suzuki concerning Qualification and Employment History

He received his B.E., M.E. and Ph. D. degrees in electronics engineering from Hokkaido University, Japan, in 1979, 1981 and 1984, respectively. Since 1984, he has been engaged in research on high-speed electro-absorption modulator (EAM), optical solution transmission, WDM undersea cable systems (TAT-14 and Japan-US), and GMPLS networks in KDDI R&D Laboratories. He received the best paper award and achievement awards from IEICE in 1995 and 2004, respectively. Currently, he is an Executive Director of KDDI R&D Laboratories and an IEEE fellow.